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AUTHOR Bonnet, Deborah G.; Richert, Mary K.
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ABSTRACT

This report documents a third-party evaluation of Career Decisions, an elective career exploration course to investigate the program's effectiveness in achieving its student outcome objectives. The report is organized into chapters by five general evaluation questions: (1) What did students experience in the classroom components?, (2) What did students experience in the site component?, (3) What do participating employers think of Career Decisions?, (4) What did students think of Career Decisions?, and (5) What did students learn from Career Decisions? These data collection methods to answer these questions are described: teacher logs (question 1), employer questionnaires (questions 2 and 3), student questionnaires (questions 4, 2, and 5), and fourteen student outcome measures (question 5). The final (and most lengthy) chapter discusses nine learner outcome objectives. Evaluation of each objective is presented in this format: classroom emphasis, student-reported learning, and measures (sample items, design, and results). Major findings were that student overall ratings of the program were high, 92% of the participating employers responding endorsed the program, students demcnstrated at least partial achievement of eight of nine objectives, and Career Decisions students continued to explore their career interests on their own after program completion. (YLB)

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NED NEW EDUCATIONAL DIRECTIONS, INC.

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BOX 307 CRAWFORDSVILLE, INDIANA 47933 (317) 362-8877

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CAREER DECISIONS

A Program of the Indianapolis
Public Schools

FINAL EVALUATION REPORT

August, 1980

Deborah G. Bonnet
Mary K. Richert

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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EXECUTIVE SUMMARY

Last year 876 Indianapolis high school students got a first-hand look at how people make their livings. They were participating in Career Decisions, a one-semester course offered in all ten IPS high schools. Career Decisions students investigate their career interests through classroom instruction combined with several half-day explorations of employment settings where students meet people working in the fields they are thinking about pursuing themselves.

New Educational Directions, Inc. performed an independent evaluation of the program during 1979-80. Their major findings are that:

- o Although students tended to be critical of particular classroom activities, their overall ratings of the program were high. On the average, students gave the course a "B." One student wrote, "I think Career Decisions is a course to take if the person is serious about learning about himself and the occupations open to him. If he isn't, he shouldn't take the course."
- o Ninety-two percent of the participating employers who responded to a questionnaire endorse the Career Decisions program. As one employer put it, "I have always felt that young people should have more opportunity to observe the actual workings of the careers they are interested in."
- o Fourteen measures of student learning demonstrated at least partial achievement of eight of the program's nine objectives (see table). Spring semester students improved on eight of the twelve measures; the previous fall students showed learning on one of twelve measures administered to them.
- o The evaluators consider the spring semester's findings remarkably positive in comparison to evaluation results of other career education programs nationwide. They speculate that the fall semester adjustment to a new curriculum and operating procedures, combined with the five weeks lost during the teachers' strike, account for the relatively poor performance of the fall-semester program.
- o Spring semester students showed improvement in these areas: (The related objective is shown in parentheses.)
 - Work-related attitudes (1a)
 - Career planning skills (1b)
 - Sense of control over their own futures (1b)
 - Knowledge of where to find career information (1c)
 - Knowledge about careers of primary interest to them (1d)
 - Job-seeking skills (1e)
 - Self-esteem (2a)
 - Consumer skills (2b)
- o Perhaps the most important finding is that Career Decisions students continue to explore their career interests on their own after the program is over. (Objective 2c)

SUMMARY OF FINDINGS BY OBJECTIVE

Column 1 shows the relative amount of time teachers gave to each objective.

Column 2 shows the relative helpfulness students reported for each topic.

Columns 3 and 4 show the number of measures showing positive program effects (before the slash) and the number of instruments used to measure the objective (after the slash). Blanks mean that the objective was not evaluated for that group.

Teacher-reported emphasis (rank, 1 high)

Student-reported learning (rank, 1 high)

Evidence of achievement by fall semester students

Evidence of achievement by spring semester students

				Objective
6	8	0/1	1/1	1a--Students will be equipped with effective work habits and capabilities.
5	2	0/3	2/3	1b--Students will be equipped with decision-making skills.
1	6	0/1	1/1	1c--Students will be equipped with skills for investigating careers and processing information.
4	3	---	1/1	1d--Students will have a practical knowledge of career clusters and relationships among various careers.
8	4	0/1	1/1	1e--Students will be equipped with skills for seeking and securing employment.
3	1	---	0/1	1f--Students will work on interpersonal skills to facilitate social and work relationships.
2	7	0/3	1/3	2a--Students will be equipped with self-assessment skills for use in making career decisions.
9	9	0/1	1/1	2b--Students will be equipped with consumer skills important for life planning.
7	5	1/2	---	2c--Students will be prepared to address the issues of life planning.
		1/12	8/12	TOTAL

- o The evaluators commend the Career Decisions program for its demonstrated effectiveness in promoting students' career development and for its success in matching students' interests with exploration sites. They recommend continued efforts to improve classroom instruction and site exploration preparation and follow-up activities.

TABLE OF CONTENTS

Program Overview	1
Evaluation Overview	7
What Did Students Experience in the Classroom Component?	9
What Did Students Experience in the Site Component?	11
What Do Participating Employers Think of Career Decisions? . . .	16
What Do Students Think of Career Decisions?	19
What Do Students Say They Learn From Career Decisions?	23
What Did Students Learn in Career Decisions?	26
Objective 1a: Students Will Be Equipped With Effective Work Habits and Capabilities	34
Objective 1b: Students Will Be Equipped With Decision-Making Skills	37
Objective 1c: Students Will Be Equipped With Skills For Investigating Careers and Processing Information	44
Objective 1d: Students Will Have a Practical Knowledge of Career Clusters and Relationships Among Various Careers	46
Objective 1e: Students Will Be Equipped With Skills For Seeking and Securing Employment	48
Objective 1f: Students Will Work on Interpersonal Skills to Facilitate Social and Work Relationships	50
Objective 2a: Students Will Be Equipped With Self-Assessment Skills For Use in Making Career Decisions	53
Objective 2b: Students Will Be Equipped With Consumer Skills Important For Life Planning	57
Objective 2c: Students Will Be Prepared to Address The Issues of Life Planning	60

PROGRAM OVERVIEW

This section summarizes key features of the Career Decisions program, officially named the Indianapolis Public Schools (IPS) Urban Area Experience-Based Exploration for Career Decisions program.

Career Decisions is a one-semester course primarily for tenth graders in IPS's ten high schools. In addition to daily 40-minute classes, students explore three work sites for a day each.

Funding. The program was developed under a three-year grant from the U.S. Office of Education's Bureau of Occupational and Adult Education (BOAE) under Exemplary Projects in Vocational Education, Part 103, Priority Area II. The program is an adaptation of the Experience-Based Career Education (EBCE) model developed by the Northwest Regional Educational Laboratories in consent with the National Institute of Education. The 1979-80 school year was the final year of the three-year grant. BOAE funds supported the program's development, administration, materials, evaluation, and site visit component; the teaching staff were supported by local and CETA funds. The program will continue in 1980-81 with support from CETA. The Indiana Governor's Discretionary Grant program will fund the fall semester, with the Indianapolis Prime Sponsor assuming support in January, 1981.

Rationale. Career Decisions is a liberal adaptation of the EBCE concept. Rather than an alternative school for a few students, it is a one-semester elective course for a large number of youth. IPS chose this approach because it is their philosophy that all students need career education. They intended from the start to maintain the program after the grant's termination, which meant that a low per-pupil cost had to be achieved. A separate course was preferred over the curriculum

infusion approach to career education due to the low probability of success of the infusion approach and the high cost of involving all IPS high school faculty in the career education effort.

Other Career Education in IPS. In addition to Career Decisions, the IPS career education curriculum includes: (1) Freshman Orientation, a required 9-week introduction to career clusters and self-awareness, (2) a unit on job-seeking skills taught through sophomore English, (3) Career Internship, a 36 clock-hour after school elective program in which students explore a career of interest in-depth at work sites, designed to build on Career Decisions, and (4) job placement services.

Three-Year History. The fundamental design of Career Decisions as a semester course consisting of classroom instruction and work site explorations has remained intact throughout the program's three years. However, the project has been marked by frequent changes in staff, curriculum, and operating procedures. The current Coordinator was hired in the spring of 1979 and major changes were instituted in the 1979 fall semester, including: a new staff organization, an inservice training program for all program staff, a new curriculum guide and text, refined procedures for assigning students to sites and preparing for exploratory experiences, and the use of taxis instead of school buses for transporting students to exploration sites. That is, the 1979-80 program was in many senses a new one, rather than a continuation of the previous two years' activities. The fall semester was essentially a trial period for the new program. Adding to the usual challenge of new programs was a heated five-week teacher's strike. The 1980 spring semester went more smoothly.

In short, Career Decisions got off to a rather troubled start in September 1977, but by June 1980, it was going well. In the evaluators' view, the 1980 spring semester was the first time that Career Decisions

demonstrated high fidelity implementation of a well-defined programmatic model. It is therefore reasonable to expect the program to continue improving for several more semesters before its quality plateaus.

Staff. Housed at the Central Office of IPS are the:

- Project Director, the IPS Director of Secondary Instruction, who oversees the program
- Project Coordinator, who manages the program's day-to-day operations full-time
- Five Employer Relations Specialists (ERSs), who coordinate the site exploration component. Each ERS is responsible for two schools
- Project Secretary

A Career Decisions teacher is based at each of the ten schools. In 1979-80, five were regular school faculty and five were certified teachers participating in a CETA program. The CETA-funded teachers reported directly to the Project Coordinator.

Students. Career Decisions is designed primarily for sophomores, though students in grades nine to twelve participate. Most of the freshmen represent one school, where they are in a special program for potential drop-outs. (The school requested Career Decisions for all freshman because they see the class as a deterrent strategy for high-risk drop-outs.) Students are enrolled through their school's usual class scheduling procedures and without regard to sex, race, economic status, or academic ability.

Total enrollment was 385 in the fall and 499 in the spring. Ten schools offered a total of 22 class sections, as detailed in Table 1 for the 1980 spring semester. Males and females were represented equally. Blacks outnumbered whites two to one.

No socioeconomic status or academic achievement data were collected on Career Decision students, but they are estimated by project staff as

representative of IPS students. IPS is typical of center city schools, with a high proportion of minorities (50%) and low income families (21%).

Eighteen percent of IPS students drop out before graduation and forty percent of graduates pursue postsecondary education.

TABLE 1 Spring 1980 Enrollments

By School

<u>School</u>	<u>#classes</u>	<u>#students</u>
Arlington	4	78
Broad Ripple	1	20
Crispus Attucks	1	9
Emmerick Manual	1	33
George Washington	3	39
John Marshall	1	22
Northwest	4	120
Shortridge	2	60
Arsenal Tech	4	115
Thomas Carr Howe	1	22
	22	518

By Student Characteristics

Black	66%	Freshman	33%
White	33%	Sophomore	50%
Male	50%	Junior	11%
Female	50%	Senior	6%

Objectives. The program has two goals and nine objectives, as follows:

GOAL 1: Assist every student to work in the adult world

A. Students will be equipped with effective work habits and capabilities.

B. Students will be equipped with decision-making skills.

- C. Students will be equipped with skills for investigating careers and processing information.
 - D. Students will have a practical knowledge of career clusters and relationships among various careers.
 - E. Students will be equipped with skills for seeking and securing employment.
 - F. Students will work on interpersonal skills to facilitate social and work relationships.
- GOAL 2: Expose the students to the differences between the necessity of work and the desirability of fulfillment through work
- A. Students will be equipped with self-assessment skills for use in making career decisions.
 - B. Students will be equipped with consumer skills important for life planning.
 - C. Students will be prepared to address the issues of life planning.

(The key words underlined above are used hereafter to refer to the objectives.)

Classroom component. Career Decisions meets for 35 to 40 minutes each day. McKnight's Succeeding in the World of Work is used as a text and teachers are encouraged to use supplementary materials and to vary their teaching techniques. The "Career Decisions Curriculum Outline" recommends specific activities and performance indicators for each objective listed above.

Site component. Each student visits up to three work sites during the semester, spending a half to a full day at each. The program strives to maximize student participation at sites. Most site experiences are best described as "shadowing", with individual students or small groups interacting closely with workers. Due to the nature of the site or employers' requirements, some explorations would better be described as field trips, with larger groups of students observing activities rather than participating in them.

Exploration sites are developed by ERSs in person and by phone and employers are also provided printed materials to help them structure the students' visits. Students are matched to sites on the basis of interviews with ERSs at the beginning of the semester, following a career interest inventory.

IPS contracts with a local cab company for transporting students to and from sites. This is less costly than school buses, which were used the first two years, and allows greater flexibility in scheduling.

EVALUATION OVERVIEW

New Educational Directions, Inc. (NED) was first commissioned as the Career Decisions Program's third-party evaluator half-way through the three-year BOAE grant, in January, 1979. (Another evaluator preceded us.) NED's evaluation of the spring 1979 semester was formative in nature, designed to produce information for use in program improvement.

Since major changes were made in the Career Decisions curriculum, operations, and staff in 1979-80, NED proposed to maintain a formative evaluation focus during the fall semester of 1979-80, and to use the spring semester for summative evaluation. However, the Project Director chose to devote the entire evaluation budget to summative evaluation, particularly to investigating the program's effectiveness in achieving its student outcome objectives. Therefore, no evaluation data were collected this year until the last week of the fall semester and the evaluation was designed to draw conclusions about Career Decisions rather than to generate recommendations for its refinement.

The evaluation was designed to answer five general questions:

- (1) What did students experience in the classroom component?
- (2) What did students experience in the site component?
- (3) What do participating employers think of Career Decisions?
- (4) What did students think of Career Decisions?
- (5) What did students learn from Career Decisions?

Four kinds of data were collected in answering these questions:

Teacher logs - teachers recorded the instructional methods and objectives of each day's activities. (Question 1 above)

Employer questionnaire - addressing questions 2 and 3, mailed to a sample of 110 participating employers.

Student questionnaires - addressing question 4 and students' perspectives on questions 2 and 5, administered at the end of the spring semester.

Student outcome measures - fourteen measures of student achievement of program objectives. (Question 5)

The remainder of this report is organized by the 5 general evaluation questions. Since multiple data sources are drawn upon in answering each question, the procedures are summarized here for teacher logs, employer questionnaires, and student questionnaires. Procedures for the student outcome evaluation are discussed in the final (and most lengthy) chapter.

Teacher logs. The "Weekly Overview of Classroom Activities" is a 99-cell matrix listing the 9 Career Decision objectives down the side and 11 instructional methods across the top. Teachers were to indicate which cell best described the purpose and methods of each day's activities; up to three entries were allowed per day. Logs were submitted to the Program Coordinator weekly and delivered to NED for analysis after the end of the semester. Altogether, 152 (75%) of the logs were submitted.

Employer questionnaires. The employer questionnaire was developed on the basis of personal visits to three exploration sites. NED randomly selected 110 employers from the program's list of "active" exploration sites and addressed questionnaires to the individuals indicated as the site contact persons. Employers were invited to respond confidentially or, if they wanted their questionnaire forwarded to the Career Decisions staff, to indicate their business. Questionnaires were mailed June 16. Forty-eight (44%) of the questionnaires were returned to NED by July 8.

Student questionnaires. The student questionnaire was developed on the basis of observations of eight Career Decisions classes. The questionnaire was confidential (requesting no names) and was administered by teachers to all students during the final two weeks of the semester. NED received 155 completed questionnaires.

WHAT DID STUDENTS EXPERIENCE IN THE CLASSROOM COMPONENT?

The analyses of teacher logs are presented in Table 2 by objective and Table 3 by method. Column 2 of both tables shows percentages of time weighted for enrollments. Thus, these results estimate what students experienced rather than what teachers did.

The program objectives receiving greatest attention were 1c (skills for investigating careers), 2c (self-assessment skills), and 1f (interpersonal skills); half the classroom time was devoted to these three areas. Consumer skills (2b) received the least attention, perhaps because of this objective's relatively distant relationship to career education. Little time was spent on employment-seeking skills (1e) because this topic is taught through sophomore English classes. Moderate emphasis was given to career clusters (1d), decision-making skills (1b), work habits (1a), and life planning (2c).

TABLE 2 - Classroom Emphasis By Objective

By Teacher report through weekly logs. Submission rate = 75%

Number teachers (of 12) devoting more than 10 percent of instructional time to objective.

Mean percentage of time devoted to objective, adjusted for enrollment.			
		<u>Rank</u>	<u>Objective</u>
4	9%	6	1a Work habits
7	10%	5	1b Decision-making skills
11	19%	1	1c Skills for investigating careers
6	11%	4	1d Career clusters
4	8%	8	1e Employment-seeking skills
7	14%	3	1f Interpersonal skills
10	17%	2	2a Self-assessment skills
1	3%	9	2b Consumer skills
6	9%	7	2c Life Planning

TABLE 3 - Frequency of Use of Classroom Methods

By teacher report through weekly logs. Submission rate = 75%

No. teachers (of 12) using method 10% or more of the time

Mean usage, weighted for enrollment		Method
No. teachers (of 12) using method 10% or more of the time	Mean usage, weighted for enrollment	
12	29%	Whole class discussion
10	16	Lecture/text
3	8	Workbooks
4	7	Films
4	7	Special projects
3	6	Speakers
1	6	Tests
3	6	Site visit reports
2	5	Small group discussions
2	5	Role playing
3	5	Games

As shown in Table 3, whole class discussion was the most commonly used method; it was also the most popular means of addressing each of the nine objectives. The three most traditional methods (whole class discussion, lecture/text, and workbooks) accounted for 53% of class time. Teachers were especially encouraged to provide students opportunities to interact in small groups. By adding together the time spent in small group discussions, role-playing, and games, we find that small group work accounted for 15 percent of class time, about the same as lecture/text.

NED concludes from these data that all nine Career Decisions objectives were given appropriate attention and that a reasonable variety of teaching strategies was employed.

WHAT DID STUDENTS EXPERIENCE IN THE SITE COMPONENT?

Table 4 shows employers' responses to questions about the number and nature of site visits; table 5 shows student responses to similar questions.

Number of visits. Students reported making an average of 1.88 site visits. (Question 14, table 5) Career Decisions program records indicate that an average of 2.74 visits was scheduled for each student; this includes cancellations and no-shows. The program's goal is three explorations per student.

Employers reported from zero to six student visits during the 1979-80 school year. Discounting those who recalled no visits, each site was used an average of 1.17 times. (Question 1, table 4)

Number of students per visit. According to employers, the number of students per visit averaged 3.6, and over one-third of the trips involved more than 5 students. (Question 2, table 4)

Duration of visits. According to students, the time spent at exploration sites ranged from one to seven hours and averaged 1.88 hours. (Question 27, table 5)

Student interest in careers at exploration sites. Both employers and students indicate that this year's procedures for matching students' career interests with exploration sites worked well. (Question 4, table 4 and question 15, table 5)

Student preparation for explorations. According to both students and employers, students were sufficiently prepared for their visit about two-thirds of the time. (Question 5, table 4 and questions 16 and 17, table 5)

TABLE 4 Employer Questionnaire Results Pertaining to
Student Site Visit Experiences

N = 48; response rate = 44%

1. During this school year (1979-80), on how many different occasions did Career Decisions students visit your place of business?

Range: 0-6 Discounting 0's, median = 1.17

If no students visited your business this year, please skip to question 8.

10 people (21%) reported no visits. Percentages for questions 2-7 are based on an N of 38.

2. Sometimes Career Decisions students visit businesses alone and at other times they come in groups. Please indicate how many youth were involved in visits to your business this year.

<u>19%</u> visit(s) involved <u>1</u> students	<u>13%</u> visit(s) involved <u>11-20</u> students
<u>10%</u> visit(s) involved <u>2</u> students	<u>15%</u> visit(s) involved <u>21-46</u> students
<u>34%</u> visit(s) involved <u>3-5</u> students	Total number visits = 68
<u>9%</u> visit(s) involved <u>6-10</u> students	Median number students = 3.6

3. What did the student(s) do during their visits? Please check all that apply.

89% Talk with workers about their jobs

89% Watch people work

76% Go on a tour of the site

29% Practice working at job tasks

42% Hear a lecture

21% Watch a film

13% Other (Please describe) _____

4. In general, did the student(s) seem interested in the career areas they explored at your business?

92% Yes 8% No

5. In general, did the student(s) seem adequately prepared to ask good questions about careers represented at your business?

66% Yes 32% No 2% Blank

6. In general, how would you describe the students' conduct?

50% Impressively courteous --- Unacceptable

48% Acceptable 2% Blank

7. How do you feel about the assistance and support you have received from the Career Decisions staff?

74% received all the help I needed. 5% Blank

21% would have appreciated more help.

TABLE 5 Student Questionnaire Results Pertaining
To Site Visit Experiences

N = 155

14. How many site visits (career explorations) did you go on? 8% Blank

1 = 19% 2 = 33% 3 = 26% 4-8 = 14% Median, discounting
blanks = 1.88

IF YOU DID NOT GO ON ANY SITE VISITS, SKIP TO QUESTION 31.

9 students (6%) reported no visits. Percentages for #15-30 are
based on an N of 146.

15. Did you get to visit places with careers you wanted to explore?

1% Blank

57%a. Yes, *all* of the places I visited had careers I wanted
to explore.

36%b. At *least one place* I visited had careers I wanted to
explore, but the others did not.

6%c. No, *none* of the places I visited had careers I wanted
to explore.

Please answer questions 16-27 about your *last* (most recent) site visit.

Before your last site visit, did you:

16. . . . know what you were supposed to do when you got there?

57%a. Yes 42%b. No 1% Blank

17. . . . study about an occupation at the site?

64%a. Yes 34%b. No 2% Blank

During your last site visit, did you:

18. . . . talk with workers about their jobs?

82%a. Yes 18%b. No

19. . . . watch people work?

77%a. Yes 22%b. No 1% Blank

20. . . . go on a tour of the site?

77%a. Yes 12%b. No 10% Blank

21. . . . practice working at job tasks?

38%a. Yes 52%b. No 10% Blank

22. . . . hear a lecture?

72%a. Yes 27%b. No 1% Blank

23. . . . watch a film?

40%a. Yes 58%b. No 1% Blank

After your last site visit, did you:

24. . . . get enough of a chance to talk about your experience with your teacher and classmates?

61%a. Yes 36%b. No 3% Blank

25. . . . look for more information about the occupation(s) you had observed?

51%a. Yes 47%b. No 2% Blank

26. . . . feel that you had a pretty good idea of what it would be like to work at the site?

82%a. Yes 17%b. No 1% Blank

27. How long were you at the site during your last visit? (Do not include the time it took to get there and back.)

___ hours Range: 1-7 hours Median: 1.88 hours 5% Blank

Employer preparation. About three-fourths of employers felt that they had received adequate assistance and support from the Career Decisions staff. (Question 7, table 4)

Student conduct at sites. Employers report generally good student conduct with half of them describing their student visitors as impressively courteous and half as acceptable. (Question 6, table 4)

Student activities on site. Students and employers both reported that over 75% of the explorations entailed talking to workers about their jobs, watching people work, and touring the site. Although 72% of students remembered hearing a lecture, only 42% of employers remembered giving one. Slightly less easy to explain is that 29% of employers said that students practiced working at job tasks, but 38% of students reported doing this. (Question 3, table 4 and questions 18-23, table 5)

Follow-up of site visits. Over one-third of the students felt they needed more opportunity to discuss their exploratory experiences with their teachers and classmates and only half pursued their investigations of careers they explored at sites. On the other hand, 82% of the students felt that their explorations gave them "a pretty good idea of what it would be like to work at the site." (Questions 25-27, table 5)

Conclusions. NED concludes from these data that the matching of students with exploration sites was successful. However, student preparation and follow-up of explorations could be improved and the program should strive toward sending students to sites alone or in groups of two or three. This would allow students more participation in job tasks and more thorough questioning of workers.

WHAT DO PARTICIPATING EMPLOYERS THINK OF CAREER DECISIONS?

The response rate on the employer questionnaire was disappointingly low (44%). However, the responding employers came out in strong support of Career Decisions, with 92% endorsing the program's continuation and 85% expressing interest in maintaining their personal involvement.

Employers' written comments repeatedly stressed that students need experience with actual working situations while making career plans.

Specific comments included:

"The program gives young people a view of the career as it is actually done."

"I think the personal inspection of a facility shows the individual the true picture rather than an imagined one which may be totally inaccurate."

"Exposes students who are interested in pursuing careers in similar areas to actual people working on those jobs."

"I have always felt that young people should have more opportunity to observe the actual workings of the careers they are interested in."

Although employers clearly endorse the concept behind Career Decisions, many of their comments suggested a lack of understanding of the total program. Some were unaware of the classroom component, as seen in comments like, "Students should make reports about their site visit experiences." Others did not realize the program has a full-time staff: "Was unaware of any such staff--we just received a phone call asking to give a tour to some high school kids."

NED received one call from an employer who did not know which group of youth he had hosted were from Career Decisions; we suspect that this problem might have contributed to the low response rate to the questionnaire.

About three-quarters of the employers were satisfied with the assistance and support they received from the Career Decisions staff.

Their comments include:

"I feel they are unorganized and wait until the last minute."

"Support is top-notch."

"Very helpful."

"They seemed interested in the program and in trying to make it work."

Suggestions for changing the program followed four repeated themes:

1) Limit the size of the groups of students on each visit. 2) Have a teacher present on each visit. 3) Brief the students better before each visit so that they can ask better questions. 4) Conduct more extensive preparation with employers before the visit.

NED concludes that the program's employer relations are adequate, but, with some notable exceptions, not exemplary. We recommend minimizing the size of exploration groups in response to employers' concerns, as well as students' needs.

We also recommend increased efforts to inform employers of the full scope of the program, particularly through personal contact. This recommendation is based not so much on evidence that employers' current lack of understanding is harmful to Career Decisions as on the suspicion that a rich opportunity is being missed. The philosophy of Career Decisions holds great appeal for employers. Based on our work with other community-involvement efforts, NED believes that greater attention to fostering these relationships would be successful and result in important pay-offs for the public image of IPS, as well as employer participation in Career Decisions.

TABLE 6

Employers' Opinions of Career Decisions

N = 48; response rate = 44%

7. How do you feel about the assistance and support you have received from the Career Decisions staff?

5% Blank

74% I received all the help I needed.

21% I would have appreciated more help.

8. Do you endorse continuation of the Career Decisions program?

92% Yes 2% No 6% Blank

9. Do you personally wish to remain involved in Career Decisions?

85% Yes 6% No 9% Blank

WHAT DO STUDENTS THINK OF CAREER DECISIONS?

The return rate for student questionnaires was also low (31%). This is partially because the questionnaire was not administered in 5 of the 21 classes, but high absenteeism at the end of the semester also contributed to the problem. Thus, it is reasonable to assume that the student questionnaire sample is biased in favor of more conscientious students.

As shown in Table 7, students' overall assessments of the course are quite high, with almost 60% rating the course above average (question 1). The majority of students thought the course's difficulty was just right, but over one-third found it too easy (question 2).

Students place high value on site explorations; substantial majorities think there should be more and longer site visits and that eliminating site visits would detract from the program (questions 28-30).

In an open-ended format on the questionnaire students were asked what they like most and least about Career Decisions. An opportunity was also provided for them to make additional comments of any kind about the program.

Without a close second, site visits were the topic students most frequently commented about. Many students simply answered, that "Site Visits" was what they like best, and there was "nothing" or "I liked all of it" that they liked least.

What they liked best about site visits frequently included statements such as,

"I enjoyed being able to go out and see what the jobs were really like."

"Going to visit the type of occupation I might want to do in my latter years."

TABLE 7 Students' Opinions of Career Decisions

1. Overall, what do you think of the Career Decisions class?
 - 32% a. One of the best courses I have taken.
 - 27% b. Better than average
 - 32% c. Okay
 - 3% d. Not as good as most
 - 4% e. One of the worst courses I have taken
 - 1% Blank
2. In general, the course was:
 - 37% a. Too easy
 - 61% b. Just right
 - 1% c. Too hard
 - 1% Blank
28. Do you think site visits should be longer?
 - 64% a. Yes
 - 34% b. No
 - 2% Blank
29. Do you think there should be more site visits in Career Decisions?
 - 82% a. Yes
 - 13% b. No
 - 5% Blank
30. Do you think Career Decisions would be just as good (or better) *without* site visits?
 - 24% a. Yes
 - 70% b. No
 - 6% Blank

"Going to companies and getting to see things."

"Getting to meet people on their job."

What they liked least about site visits also clearly indicates the importance they place on site visits:

"I didn't know whether I liked doing one job more than another because I only got a chance to go on one trip."

"Missing the cab."

"Not getting to go on hardly any trips."

Often students' comments about the course showed that careers are a serious concern of theirs. These comments were what they liked best

about Career Decisions:

"You get to find out about something you'd like to do."

"They let you find out the career that best fits you."

"The opportunity to learn things about the occupations I'm interested in."

Not everyone's interest in career decisions was of such a serious nature. A couple of students stated what they liked best about Career Decisions is that:

"You get to leave school and go on trips."

If students commented about their teachers, it was in a supportive way. Students from several different classes simply listed, "The teacher" as what they liked best. Several other students gave more lengthy statements about how they valued their teacher such as:

"I will always remember what my teacher helped me out with."

Students also were positive in their comments about the ERSs. Comments about what they liked best included:

"The director of the trips."

Students' comments about classroom activities were generally critical. Some listed specific activities as what they liked least:

"Coming to class, and looking in those Career Decisions books."

"The workbook assignments."

"The films after I seen them 4 times each."

"The tests."

"The boringness of class work."

Other students' criticisms were more general:

"We just stayed in one room and listened to a talk or lecture."

"It needs to be a little more exciting."

"The time we spend doing nothing in here."

A dissenter to this line of thinking said, "We didn't work in the books enough."

Speakers were a topic that received a mixed reaction. In the same classes, some students listed, "speakers" "guests" or "visitors" as what they liked best while others listed that as what they liked least.

Students also were disapproving of evaluation measures. Two comments listed under what they liked least were:

"Taking the post-test."

"Things like this."

A number of students were also genuinely dissatisfied with their classmates. Frequent comments under what they liked least included:

"Too many big mouths in class."

"Having people in class that didn't want to learn, they distracted others talking loud and being very rude."

The general comments section usually had an endorsement for the program:

"Could we have a Career Decisions part 2?"

"Will recommend to anyone."

"To me Career Decisions should be required because too many people leaving high school do not know how to present themselves in finding a job. Also, many do not know how to do resumes."

"I think Career Decisions is probably one of the best classes in high school and hope it continues on."

Generally, Career Decisions students seem to feel,

"I think Career Decisions is a course to take if the person is serious about learning about himself and the occupations open to him. If he isn't, he shouldn't take the course."

WHAT DO STUDENTS SAY THEY LEARN FROM CAREER DECISIONS?

Questions 3 and 4, Table 8, demonstrate that the overwhelming majority of students believe that the program met its fundamental purposes. Ninety-six percent left the program with a better idea of what they want to do with their futures and 80 percent felt more confident about their future careers as a result of Career Decisions.

Questions 5-13, Table 8, are re-wordings of the program's objectives. Over half of the students found topics related to all nine objectives "very helpful" with the exceptions of consumer skills (2b) and self-assessment (2a). The most helpful topics were interpersonal skills (1f), decision-making skills (1b), and career information (1d).

As shown in the summary table of the Executive Summary, student-reported learning corresponds fairly well to teacher-reported classroom time allocation, with the following exceptions where the two ranks differ by four or more:

- o 1c-skills for investigating careers was rated 1st on classroom emphasis; 6th in helpfulness.
- o 1e-employment-seeking skills was rated 8th on emphasis and 4th on helpfulness.
- o 2a-self-assessment skills was rated 2nd on emphasis and 7th on helpfulness.

TABLE 8

Student-Reported Learning

N = 155

3. After taking Career Decisions, do you now have a better idea of what you want to do with your future?

51%a. Yes, definitely

45%b. Maybe a little

4%c. No

4. Do you feel more confident about your future career as a result of Career Decisions?

45%a. Yes, definitely

41%b. Maybe a little

11%c. No

3% Blank

Below is a list of topics you may have covered in your Career Decisions class. For each:

Check 'a' if the topic was *very helpful* - you learned a lot.

Check 'b' if the topic was *somewhat helpful* - you learned a few things

Check 'c' if the topic was *not helpful* - you learned nothing new.

Check 'd' if the topic was *not covered* in your class.

	very helpful	somewhat helpful	not helpful	not covered	rank*
5. How to act at work so you will keep your job and get ahead. (1a)	<u>53%</u> a	<u>35%</u> b	<u>2%</u> c	<u>10%</u> d	<u>8</u>
6. How to make decisions and plan your career. (1b)	<u>56%</u> a	<u>37%</u> b	<u>6%</u> c	<u>1%</u> d	<u>2</u>
7. How to get information about careers. (1c)	<u>53%</u> a	<u>37%</u> b	<u>8%</u> c	<u>3%</u> d	<u>6</u>
8. Careers that interest you--what they are like and what they require. (1d)	<u>56%</u> a	<u>35%</u> b	<u>7%</u> c	<u>2%</u> d	<u>3</u>
9. How to get a job. (1e)	<u>60%</u> a	<u>26%</u> b	<u>9%</u> c	<u>5%</u> d	<u>4</u>
10. How to get along with a boss and other people at work. (1f)	<u>57%</u> a	<u>36%</u> b	<u>5%</u> c	<u>2%</u> d	<u>1</u>

TABLE 8 (cont.)

	very helpful	somewhat helpful	not helpful	not covered	rank*
11. What you want from a career and what you are good at doing. (2a)	<u>46%</u> a	<u>43%</u> b	<u>8%</u> c	<u>3%</u> d	<u>7</u>
12. How to be a good consumer. (2b)	<u>37%</u> a	<u>45%</u> b	<u>8%</u> c	<u>10%</u> d	<u>9</u>
13. How to keep improving your career as you grow older. (2c)	<u>56%</u> a	<u>30%</u> b	<u>7%</u> c	<u>6%</u> d	<u>5</u>

*Based on an index calculated as percentage regarding very helpful minus
(not helpful plus not covered).

WHAT DID STUDENTS LEARN IN CAREER DECISIONS?

Measures, Methods, and Samples

The evaluation employed a total of 14 measures of student achievement of the program's nine learner outcome objectives. The research design and sampling plan varied according to the testing format, of which there were four:

- paper-and-pencil tests (6 forced-choice and 4 open-ended)
- audio-visual test (1)
- interviews (2 interview question sequences)
- unobtrusive measure (1)

Paper-and-Pencil Tests

Nine of the measures are paper-and-pencil tests; six are multi-item forced-choice tests and four are open-ended questions or question sequences. In order to minimize testing time, the nine tests were divided into four test forms requiring approximately equal amounts of time to complete. (Twenty to thirty minutes.)

Design and analyses. All 1979-80 Career Decisions students were to participate in the paper-and-pencil testing, with each student taking one test form (2 or 3 of the 9 measures). Fall semester students were tested at the program's conclusion (January) and spring semester students at the beginning (late January) and end (late May).

The spring semester students' pre-program performance was compared first to the previous fall students' post-program performance. In these analyses, the spring students served as a control group for the fall (experimental) group. Since the two groups were tested at approximately the same time and both groups had volunteered for the program, these

analyses control for both maturation and volunteer effects. The one-way analysis of variance for independent groups was used for interval-level measures; this yields the same results as the t-test for independent groups. Between-group differences on nominal measures were tested with the chi-square.

Additional analyses compared spring students' post-program performance to their own pre-program performance to investigate change in the same youth. This pre-post design is generally more sensitive to program effects than the experimental/control group design, but it fails to discount the possibility of growth due to maturation or to experiences unrelated to the program. The t-test for correlated samples was used for interval-level measures and the McNemar sign test for nominal data.

Thus, the strongest evidence of program effects would be where end-of-program performance for both fall and spring semester students was significantly higher than the spring students' pre-program performance. Unfortunately, this occurred for none of the measures.

NED's evaluation experience indicates that the possibility of negative program effects should never be discounted; it is not at all unusual for students to do better at the beginning of a program than at the end. Therefore, all statistical tests were two-tailed, which means that the significance of losses, as well as gains, was examined. Since one-tailed tests would be more conventional for this application, the conventional alpha of .05 was waived in favor of .10 to preserve the same power of significance testing that would result from the convention of one-tailed tests with alpha at .05.

Group means were computed by sex, as well as semester or test date. Where interactions were suspected, additional analyses were conducted,

but none were found significant. That is, there is no reason to believe that Career Decisions affects boys and girls differently.

Administration. Test administration was performed by Career Decisions teachers following NED-provided training and written instructions.

Using fall class rosters, NED entered students' names onto fall post-tests before delivering them to IPS. The first student listed for the first class was assigned test form 1, the second 2, and so on resulting in an-effectively-random 25% sampling plan for each measure. Since class rosters were not available to NED in time for spring semester pre-testing, ERSs followed these procedures for spring pre-testing. To assure that spring students received the same form at post-testing, NED entered names onto post-tests from the pre-test roster.

Samples. Eighty-six percent of fall students were post-tested; absenteeism accounted for missing data. Only 69% of spring students were pre-tested due to a combination of absenteeism and late enrollment. Matchable pre- and post-tests were received from 52 percent of the spring enrollment; this was down from the 69 percent who were pre-tested primarily because of very high absenteeism during the final two weeks of the semester. Pre-test scores of students who also submitted post-test were generally higher than the average for all pre-tested students combined, suggesting that the matched sample favored better students.

Measures. Five of the forced-choice paper-and-pencil tests are from the NED-developed Career Orientation Battery (COB): Work-Related Attitudes, Career Planning, Self Esteem, Job-Seeking Skills, and Locus of Control. NED began work on the COB in 1975 for use in previous career education program evaluations. The version used for Career Decisions was developed for a 1978 evaluation of SPEDY in Indiana's

Balance-of State (a CETA summer youth program) and validated with over 2,200 economically disadvantaged rural 14-21-year-olds. The validation study included measures of construct validity, test-retest reliability, and internal consistency. Each of the scales used for Career Decisions was shortened by one or two items through elimination of items which reduced internal consistency.

The COB is particularly suitable for Career Decisions because of its low reading level (estimated at second to fourth grade level) and its demonstrated reliability for disadvantaged youth. The complete COB for the secondary level consists of nine scales; only the five most closely associated with the Career Decisions objectives were used here. A technical manual is available from NED and scale descriptions are provided below with the results of each scale.

The sixth forced-choice test and one open-ended paper-and-pencil measure were derived from released items used in the National Assessment of Educational Progress. Two open-ended questions were developed by NED for the Career Decisions evaluation; they should be considered experimental.

Audio-Visual Test

The AV test, called "Work Situations," was developed too late for administration as a pre-test. Instead, the plan was to administer it in five schools through sophomore English classes, including Career Decisions students (experimental) and non-participating (comparison) students. However, since the five schools (chosen at random by NED) are large and Career Decisions students are enrolled in a large number of different English classes, the test was administered in five sophomore English classes and five Career Decision classes instead.

The AV test was administered by a Career Decisions ERS after NED training; the measure is described with its results.

Interviews

Two measures were in interview format. Interviews were conducted by the junior author at students' schools.

One series of questions, drawn from National Assessment of Educational Progress items, addresses students' career knowledge and decision-making skills through a pre-post design. Four spring semester students were selected randomly from each of the ten schools. They were administered both interview guides at the semester's beginning (early February) and the career decision-making one at the end (late May). Eleven of the forty students were not interviewed in May due primarily to scheduling problems at the schools. Thus, this measure is based on an N of 29 with each school represented about equally rather than in proportion to enrollment (as the other measures).

The second interview measure asks students what they have done during the previous semester to investigate their career interests. The purpose was to determine whether Career Decisions results in continued career exploration after the program's conclusion. The experimental group in this case was fall semester students, who were interviewed in May about their spring semester activities; the comparison group was spring semester students, who were questioned in February about their fall semester activities.

Unobtrusive Measure

An unobtrusive measure was used to investigate Career Decisions students' inclination toward self-initiated career exploration. A brochure offering career materials was mailed in May to the homes of 151 students who had never taken Career Decisions and to 163 fall semester Career Decisions students. The criterion was the number of order forms returned.

The student learning results are presented by objective along with data indicating the objective's emphasis in the classroom component and students self-reported learning. Three of the objectives were measured with more than one test. Also, some of the measures are related to multiple objectives, as indicated in the "see also" section at the end of the discussion of some of the objectives.

SUMMARY OF SAMPLES

	Number	% of enrollment	% by Sex M F		% by Grade 9 10 11 12				# schools involved
<u>Enrollment (IPS data)</u>									
Fall semester	385		NA	NA	NA	NA	NA	NA	10
Spring semester	490		50	50	33	50	11	6	10
<u>Tests received: All forms combined</u>									
Fall post	330	86	48	52	28	54	10	8	10
Spring pre	338	69	49	51	34	49	10	6	10
Spring pre-post matches	257	52	48	52	36	48	11	5	10
<u>Form 1 (blue)</u>									
Fall post	75	19	49	51	32	52	11	5	10
Spring pre	100	20	45	55	37	45	12	5	10
Spring pre-post matches	69	14	44	56	41	45	10	4	10
<u>Form 2 (yellow)</u>									
Fall post	91	24	45	55	28	56	8	7	10
Spring pre	98	20	42	58	34	53	8	5	10
Spring pre-post matches	68	14	44	56	31	54	10	4	10
<u>Form 3 (green)</u>									
Fall post	78	20	50	50	24	56	13	6	10
Spring pre	94	19	60	40	33	47	11	6	10
Spring pre-post matches	58	12	60	40	36	45	10	7	10

SUMMARY OF SAMPLES (con't.)

	Number	% of enrollment	% by Sex		% by Grade				# schools involved
			M	F	9	10	11	12	
<u>Form 4 (pink)</u>									
Fall post	86	22	49	51	28	50	8	12	10
Spring pre	96	20	51	49	33	49	10	7	10
Spring pre-post matches	62	13	45	55	36	47	11	6	10
<u>Interviews</u>									
Fall follow-up	37		47	53	22	62	14	2	10
Spring pre	45		49	51	35	54	6	4	10
Spring pre-post matches	29		48	52	28	55	10	6	10
<u>A/V test (Work Situations)</u>									
Career decisions students	70	14							5
Comparison students	79	--							5
<u>Mailed brochure</u>									
Career decisions students (fall)	163	42							5
Comparison students	151	--							5
<u>Student questionnaires</u>									
Spring students	155	32							10

OBJECTIVE 1A: STUDENTS WILL BE EQUIPPED WITH EFFECTIVE WORK
HABITS AND CAPABILITIES

Classroom emphasis

Teachers reported devoting from 0 to 25 percent of the classroom time to the objective. The average, adjusted for class enrollment, was 10 percent, making the objective rank 6th of nine in classroom emphasis. The most common methods of addressing the objective were whole class discussions, and lecture/text.

Student-reported learning

Students rated the helpfulness of the topic, "how to act at work so you will keep your job and get ahead."

They answered as follows:

53% very helpful	2% not helpful
35% somewhat helpful	10% not covered

This objective ranked 8th of nine in student-reported learning.

Measure 1: COB Work-Related Attitudes

Measure. This paper-and-pencil test appears on form 1. The scale's 30 items reflect attitudes which presumably underlie good work habits. It was developed on the basis of a 1977 NED study of worker attributes valued by Indiana employers; an earlier version was content-validated by a sample of employers. Specifically, the items address:

- Desire to work
- Desire to get along with others in the work setting
- Acceptance of supervision and work regulations
- Sense of responsibility to employer and co-workers
- Dependability with respect to punctuality and regular attendance at work
- Inclination to perform well without close supervision

-Concern for quality work, desire to do her/his best

-Desire to learn and to advance in a job

Sample items:

I would feel good about working really hard to help meet a company deadline.

A. disagree B. don't know C. agree

If there is anything you do not like about your job, you should quit.

A. disagree B. don't know C. agree

Internal consistency: .78

Test-retest reliability: .59

Design. The performance of fall and spring students was evaluated.

The design is summarized below; see page 26 for details.

	<u>Fall evaluation</u>	<u>Spring evaluation</u>
Criterion scores	fall post	spring post
Baseline or comparison	spring pre	spring pre
Statistic	1-way ANOVA	<u>t</u> for corr. samples
Sampling	25% - proportionate to class enrollment	

Results. The results are mixed. In the experimental-control group design, the control group significantly outperformed the experimental group. However, spring semester students demonstrated significant (though not dramatic) improvement. Our conclusion is that the fall program was probably ineffective in promoting positive work-related attitudes, but that the spring semester was effective.

See Also. Objective 1f - Work Situations.

TABLE 9

Objective: 1a - Work Habits

Measure: COB Work-Related Attitudes

Mean score of norming sample (rural disadvantaged 14-21-year-olds): 48.49

Maximum possible score: 60

Design/Group	N	Mean	S.D.	Diff. Sig?
Exp. - Comp.				
Fall post	75	47.09	7.59	Yes
Spring pre	100	49.05	5.75	$p < .10$
Pre-Post				
Spring post	6.7	50.44	5.65	Yes
Spring pre		49.26	5.61	$p < .10$
Percentage of spring students whose scores . . .				
improved: 50% stayed the same: 7% declined: 43%				

OBJECTIVE 1B: STUDENTS WILL BE EQUIPPED WITH DECISION-
MAKING SKILLS.

Classroom emphasis

Teachers reported devoting from 2 to 24 percent of the classroom time to the objective. The average, adjusted for class enrollment, was 11 percent, making this objective rank 5th of nine in classroom emphasis. The three most common methods of addressing this objective were whole class discussion, lecture/text, and films.

Student-reported learning

Students rated the helpfulness of the topic, "how to make decisions and plan your career."

They answered as follows:

56% very helpful	6% not helpful
37% somewhat helpful	1% not covered

This objective ranked 2nd of nine in student-reported learning.

The student questionnaire also included the following questions:

After taking Career Decisions, do you now have a better idea of what you want to do with your future?

51% a. Yes, definitely
45% b. Maybe a little
4% c. No

Do you feel more confident about your future career as a result of Career Decisions?

45% a. Yes, definitely
41% b. Maybe a little
11% c. No
3% blank

Measure 1: COB Career Planning

Measure. This paper-and-pencil test appears on test form 3. Its 44 items address:

- Recognition of the importance of one's career in his/her life
- Recognition that a variety of career options are available
- Appreciation of the value of career planning
- Appreciation of the importance of taking personal responsibility for career decisions and confidence in own ability to make sound decisions
- Awareness of self-appraisal and career information-seeking techniques
- Involvement in self-appraisal, career information-seeking, and career option evaluation
- Inclination to consider the long-term impact of immediate career decisions
- Recognition of (relatively) irrelevant or short-sighted criteria used by some in evaluating career options
- Belief in the reversibility of prior career decisions

Sample items:

Have you thought about what kinds of jobs you would be good at?

- A. yes, a lot B. yes, some C. no

When I want a job I will take whatever looks best at the time, so thinking about careers is not important for me.

- A. disagree B. don't know C. agree

Knowing someone who does not like their job is a good enough reason to stay away from that line of work yourself.

- A. disagree B. don't know C. agree

Internal consistency: .80

Test-retest reliability: .71

Design. The performance of fall and spring students was evaluated.

The design is summarized on the following page; see page 26 for details.

	<u>Fall evaluation</u>	<u>Spring evaluation</u>
Criterion scores	fall post	spring post
Baseline or comparison	spring pre	spring pre
Statistic	1-way ANOVA	t for corr. sample
Sampling	25% - proportionate to class enrollment	

Results. Although these findings provide no evidence of effectiveness in the fall semester, the spring students' improvement is not only statistically reliable, but quite large. One common standard of educational significance is mean differences of at least one-third the standard deviation; this gain of 3.41 points is over 40% of the larger standard deviation.

TABLE 10				
Objective: 1b - Decision Making Skills				
Measure: COB Career Planning				
Mean score of norming sample (rural disadvantaged 14-21-year-olds): 56.77				
Maximum possible score: 80				
Design/Group	N	Mean	S.D.	Diff. Sig?
Exp. - Comp.				
Fall post	78	60.14	7.80	No
Spring pre	94	58.43	8.33	
Pre-Post				
Spring post	56	62.80	8.30	Yes p < .01
Spring pre		59.39	8.25	
Percentage of spring students whose scores . . .				
improved: 59% stayed the same: 7% declined: 34%				

Measure 2: COB Locus of Control

Measure. This 25 item paper-and-pencil test appearing on test form 4 is a modification of the 40-item Nowicki-Strickland Internal-External Scale (*Journal of Consulting and Clinical Psychology*; 1973, Vol. 40, 148-154).

A high score suggests that the individual has a sense of control over her or his own destiny and environment and a low score suggests a sense of powerlessness, or a belief that the person is controlled largely by society, other individuals, chance, and fate. We would expect a person with a strong sense of control to be inclined to make career decisions, to take action toward implementing them, and to engage in other self-improvement activities because she or he would expect these efforts to pay off. A person with a weak sense of control, on the other hand, would be futilistic--less inclined to take action because he or she would have little reason to believe it would make a difference.

The modifications of the Nowicki-Strickland scale consisted primarily of eliminating items pertaining to the role of student or to family relationships, rewording several items about parents to make them applicable to employment settings, and changing outmoded or inappropriate words (such as "other children" to "other people"). The yes-no response scale was retained from Nowicki and Strickland's instrument.

Sample items:

Most of the time, do you feel that you can change what might happen tomorrow by what you do today?

A. yes B. no

Do you feel that one of the best ways to handle most problems is just not think about them?

A. yes B. no

Internal consistency: .72

Test-retest reliability: .67

Design. The performance of fall and spring students was evaluated.

The design is summarized below; see page 26 for details.

	<u>Fall evaluation</u>	<u>Spring evaluation</u>
Criterion scores	fall post	spring post
Baseline or comparison	spring pre	spring pre
Statistic	1-way ANOVA	<u>t</u> for corr. samples
Sampling	25% - proportionate to class enrollment	

Results. The spring semester students demonstrated a modest but reliable movement toward internal locus of control.

TABLE 11				
Objective: 1b - Decision-Making Skills				
Measure: COB Locus of Control				
Mean score of norming sample (rural disadvantaged 14-21-year-olds): 16.01				
Maximum possible score: 25				
Design/Group	N	Mean	S.D.	Diff. Sig?
Exp. - Comp.				
Fall post	86	15.24	4.21	No
Spring pre	96	15.86	4.14	
Pre-Post				
Spring post	62	17.13	4.20	Yes
Spring pre		16.32	4.06	p < .05
Percentage of spring students whose scores . . .				
improved: 53%		stayed the same: 16%		declined: 31%

Measure 3: Job Choice Stereotypes

Measure: Test forms 3 and 4 ask students to list up to ten careers they are considering. Responses were classified as non-traditional if the student listed *at least one* career normally attributed to the opposite sex. Otherwise they were classified as traditional. Examples of careers considered non-traditional for males include: secretarial and clerical positions; child care careers; nursing; and flight attendant service. For females, they include: any career choices in the armed service; trade professions such as brick layer, mechanic, and construction worker; professional service occupations such as doctor, lawyer, and dentist; and all professional sports. Career aspirations expressed in a broad occupational category such as business, communications or agriculture were considered neuter.

Design. The performance of fall and spring students was evaluated. The design is summarized below; see page 26 for details.

	<u>Fall evaluation</u>	<u>Spring evaluation</u>
Criterion scores	fall post	spring post
Baseline or comparison	spring pre	spring pre
Statistic	chi-square	sign test
Sampling	25% - proportionate to class enrollment	

Results. The results show no effects of Career Decisions upon students' interest in non-traditional careers.

Additional analyses of these data indicate that, on the average, students were considering 5 careers. The average number did not change significantly after the program, but 51% of students listed fewer choices on the post-test while 22% listed the same number and 27% listed more.

The same question was asked of 29 students in personal interviews, with probing to identify the career of greatest current interest. The

first choice career was the same before and after the program for 20 (69%) of students. The first choice career named at the beginning of the semester was still under consideration at the end for 22 students (76%). At the end of the semester only 4 students (14%) gave as their primary interest a career they had not mentioned at the beginning.

See also. Objective 1d - Career Knowledge

TABLE 12

Objective: 1b - Decision-Making

Measure: Job Choice Stereotypes

<u>Design/Group</u>	<u>N</u>	<u>% Non-Traditional</u>	<u>Diff. Sig?</u>
<u>Experimental - Comparison</u>			
Fall post	161	31.7	No
Spring pre	187	33.2	
Fall post - girls	83	55.4	No
Spring pre - girls	83	61.4	
Fall post - boys	78	6.4	No
Spring pre - boys	104	10.6	
<u>Pre-Post</u>			
Spring post	120	39.2	No
Spring pre		37.5	
Spring post - girls	57	68.4	No
Spring pre - girls		64.9	
Spring post - boys	63	12.7	No
Spring pre - boys		12.7	

OBJECTIVE 1c: STUDENTS WILL BE EQUIPPED WITH SKILLS FOR
INVESTIGATING CAREERS AND PROCESSING INFORMATION

Classroom emphasis

Teachers reported devoting from 0 to 47 percent of the classroom time to the objective. The average, adjusted for class enrollment, was 19 percent, making this objective rank 1st of nine in classroom emphasis. The three most common methods of addressing this objective were whole class discussions, site visit reports, and speakers.

Student-reported learning

Students rated the helpfulness of the topic, "how to get information about careers."

They answered as follows:

53% very helpful	8% not helpful
37% somewhat helpful	3% not covered

The objective ranked 6th of nine in student-reported learning.

Measure 1: Knowledge of Career Information Sources

Measure. This open-ended question appears on test form 1. It reads, "Suppose you want to find out more about an occupation you are interested in. What are five things you could do NOW to find out more about the occupation?"

The question is a slight modification of the National Assessment of Educational Progress/Career and Occupational Development (NAEP/COD) exercise R104011. The score is the number of legitimate answers given.

Design. The performance of fall and spring students was evaluated. The design is summarized on the following page; see page 26 for details.

	<u>Fall evaluation</u>	<u>Spring evaluation</u>
Criterion scores	fall post	spring post
Baseline or comparison	spring pre	spring pre
Statistic	1-way ANOVA	<u>t</u> for corr. samples
Sampling	25% - proportionate to class enrollment	

Results. Spring semester students showed a large improvement of .81 standard deviation units. Compared to a national sample of 17-year-olds, they went from well below average performance to well above it.

See also. Objective 2c - Exploration Activities and Interest in Career Information.

TABLE 13				
Objective: 1c - Skills for Investigating Careers				
Measure: Knowledge of Career Information Sources				
Mean score of norming sample (national sample of 17-year-olds): 2.56				
Maximum possible score: 5				
Design/Group	N	Mean	S.D.	Diff. Sig?
Exp. - Comp.				
Fall post	75	2.12	1.55	No
Spring pre	100	2.05	1.62	
Pre-Post				
Spring post	68	3.38	1.55	Yes
Spring pre		2.12	1.55	$p < .001$
Percentage of spring students whose scores . . .				
improved: 61% stayed the same: 20% declined: 19%				

OBJECTIVE 1D: STUDENTS WILL HAVE A PRACTICAL KNOWLEDGE OF
CAREER CLUSTERS AND RELATIONSHIPS AMONG VARIOUS
CAREERS

Classroom emphasis

Teachers reported devoting from 0 to 44 percent of the classroom time to this objective. The average, adjusted for class enrollment, was 12 percent, making this objective rank 4th of nine in the classroom emphasis. The three most common methods of addressing this objective were whole class discussions, films, and career games.

Student-reported learning

Students rated the helpfulness of the topic, "careers that interest you - what they are like and what they require."

They answered as follows:

56% very helpful	7% not helpful
35% somewhat helpful	2% not covered

The objective ranked 3rd of nine in student-reported learning.

Measure: Career Knowledge

Measure. Career Decisions is intended to focus career knowledge acquisition on the students' career interests. Therefore, NED recommended against using one of the many available survey tests of occupational knowledge in favor of the NAEP/COD item R104015, which addresses students' understanding of the career they name as their current primary interest in an interview format. After determining the career that the student was considering most seriously, the interviewer asked the student to name:

1. Three things about (the career) that you would like.
2. Three things about (the career) that you would not like.

3. Three things you must be good at to be a (the career).

Scoring consisted of counting the legitimate answers to each question (maximum of 3) and adding them together.

Design. Only spring students' improvement was evaluated. The design is summarized below; see page 30 for details.

Criterion: spring post

Baseline: spring pre

Statistic: t for corr. samples

Sampling: 4 per school - even across schools

Results. Scores improved significantly, from slightly below the national average for 17-year-olds to a point above it.

TABLE 14

Objective: 1d - Career Knowledge

Measure: Career Knowledge

Mean score of norming sample (national sample of 17-year-olds): 5.34

Maximum possible score: 9

	<u>N</u>	<u>Mean</u>	<u>Diff. Sig?</u>
Spring post	29	6.34	Yes
Spring pre		5.21	p .001
Percentage of students whose scores . . .			
improved: 72%	stayed the same: 14%	declined: 14%	

OBJECTIVE 1E: STUDENTS WILL BE EQUIPPED WITH SKILLS FOR
SEEKING AND SECURING EMPLOYMENT

Classroom emphasis

Teachers reported devoting from 0 to 22 percent of the classroom time to this objective. The average, adjusted for class enrollment, was 8 percent, making this objective rank 8th of nine in classroom emphasis. The three most common methods of addressing this objective were whole class discussion, lecture/text, and role playing.

Student-reported learning

Students rated the helpfulness of the topic, "how to get a job." They answered as follows:

60% very helpful	9% not helpful
26% somewhat helpful	5% not covered

This objective ranked 4th of nine in student-reported learning.

Measure: COB Job-Seeking Skills

Measure. This 19-item paper-and-pencil test appearing on test form 2 measures knowledge about job-seeking. Eleven of the items concern employment interviews, their purpose, the importance of appropriate dress, and what to talk about during them. The other items address sources for locating potential employers, interpreting want ads, completing job applications, and the desirability of following up on initial contacts with potential employers.

Sample items:

During a job interview you should let the interviewer ask all the questions.

A. true B. false C. don't know

All job openings in a town are listed in the local newspaper.

A. true B. false C. don't know

Internal consistency: .70

Test-retest reliability: .65

Design. The performance of fall and spring students was evaluated.

The design is summarized below; see page 26 for details.

	<u>Fall evaluation</u>	<u>Spring evaluation</u>
Criterion scores	fall post	spring post
Baseline or comparison	spring pre	spring pre
Statistic	1-way ANOVA	<u>t</u> for corr. samples
Sampling	25% - proportionate to class enrollment.	

Results. Spring students demonstrated a strong improvement of about one-half a standard deviation unit.

TABLE 15				
Objective: 1e - Employment-Seeking Skills				
Measure: COB Job-Seeking Skills				
Mean score of norming sample (rural disadvantaged 14-21-year-olds): 11.76				
Maximum possible score: 19				
Design/Group	N	Mean	S.D.	Diff. Sig?
Exp. - Comp.				
Fall post	91	12.56	3.07	No
Spring pre	98	12.34	2.85	
Pre-post				
Spring post	68	13.57	2.19	Yes
Spring pre		12.40	3.04	p < .001
Percentage of spring students whose scores . . .				
improved: 66% stayed the same: 9% declined: 25%				

OBJECTIVE 1F: STUDENTS WILL WORK ON INTERPERSONAL SKILLS TO FACILITATE SOCIAL AND WORK RELATIONSHIPS

Classroom emphasis

Teacher reported devoting from 1 to 30 percent of the classroom time to this objective. The average, adjusted for class enrollment, was 14 percent, making this objective rank 3rd of nine in classroom emphasis. The three most common methods of addressing this objective were whole class discussion, lecture/text, and workbooks.

Student-reported learning

Students rated the helpfulness of the topic, "how to get along with a boss and other people at work."

They answered as follows:

57% very helpful	5% not helpful
36% somewhat helpful	2% not covered

The objective ranked 1st of nine in student-reported learning.

Measure: Work Situations

Measure. This test, presented in an audio-visual format, was developed by NED for this evaluation. It is based on the sound filmstrip "Your First Week on the Job" (Guidance Associates, 1972). The filmstrip presents six dilemmas faced by new workers; it is intended as a stimulus for group discussion.

In the Work Situations test, students see one sequence for practice. Each of three additional sequences is followed by multiple-choice questions which are read aloud on a cassette tape and also printed on the test answer sheet.

The three sequences used for the test are:

- (1) Office Grooming - an argument between an office worker and supervisor concerning his cut-off jeans.

- (2) Taking a Break - a distracting co-worker tries to get a new assemblyline worker to chat and take an unscheduled break when he needs to concentrate on learning his job.
- (3) Dealing with Complaints - a demanding customer befuddles a store clerk.

The twelve questions ask students to analyze the situations and to identify the most appropriate responses to them.

The test was drafted by the senior author and revised after a content validity review by four other NED staff members with expertise in career education measurement (the Executive Director, two Division Directors, and the junior author). The test instructions and questions were taped by the junior author and the test was administered by a Career Decisions Employer Relations Specialist.

Design. The performance of spring students was evaluated. The design is summarized below; see page 29 for details

Criterion scores: Current CD students

Comparison: Students who have never taken CD.

Statistic: 1-way ANOVA

Sampling: One class in each of five schools

Results. There was no reliable difference between students enrolled in Career Decisions during the spring semester and other students who have never participated in the program.

See also. Objective 1a - COB Work-Related Attitudes.

TABLE 16

Objective: 1f - Interpersonal Skills

Measure: Work Situations (A/V test)

Maximum possible score: 12

Design/Group	N	Mean	S.D.	Diff. Sig?
Exp. - Comp.				
Career Decisions	70	7.11	1.66	No
Comparison	79	7.30	1.87	

OBJECTIVE 2A: STUDENTS WILL BE EQUIPPED WITH SELF-ASSESSMENT SKILLS FOR USE IN MAKING CAREER DECISIONS

Classroom emphasis

Teachers reported devoting from 3 to 38 percent of the classroom time to this objective. The average, adjusted for class enrollment, was 17 percent, making this objective rank 2nd of nine in classroom emphasis. The three most common methods of addressing this objective were whole class discussions, workbooks, and lecture/text.

Student-reported learning

Students rated the helpfulness of the topic, "what you want from a career and what you are good at doing."

They answered as follows:

46% very helpful	8% not helpful
43% somewhat helpful	3% not covered

This objective ranked 7th of nine in student-reported learning.

Measure 1: COB Self-Esteem

Measure: This 20-item paper-and-pencil test appears on test form 2. It is designed to measure the degree to which the individual perceives him/herself as a valuable person. Individuals with high scores describe themselves as competent, confident, and worthy of high regard from themselves and others. They report believing that their strengths outweigh their weaknesses and that their futures are promising.

Sample items:

My life is really worth living

A. strongly disagree B. disagree C. agree D. strongly agree

I do not usually volunteer to do things because other people can do them much better than I can.

A. strongly disagree B. disagree C. agree D. strongly agree

Internal consistency: .81

Test-retest reliability: .63

Design. The performance of fall and spring students was evaluated.

The design is summarized below; see page 26 for details.

	<u>Fall evaluation</u>	<u>Spring evaluation</u>
Criterion scores	fall post	spring post
Baseline or comparison	spring pre	spring pre
Statistic	1-way ANOVA	<u>t</u> for corr. samples
Sampling	25% - proportionate to class enrollment	

Results. Spring students showed a reliable gain of about one-fourth a standard deviation unit.

TABLE 17				
Objective: 2a - Self-Assessment Skills				
Measure: CO3 Self Esteem				
Mean score of norming sample (rural disadvantaged 14-21-year-olds): 39.30				
Maximum possible score: 60				
Design/Group	N	Mean	S.D.	Diff. Sig?
Exp. - Comp.				
Fall post	91	42.11	7.52	No
Spring pre	98	41.95	7.44	
Pre-Post				
Spring post	68	44.10		Yes
Spring pre		42.16		p < .01
Percentage of spring students whose scores . . .				
improved: 74%		stayed the same: 4%		declined: 22%

Measures 2 & 3: Work Values

Measure. This open-ended question sequence appears on test form 2.

It was developed by NED for this evaluation.

- (1) Why do people want to work? Different people have different reasons. List all of the reasons you can think of for people to want to work. (10 blanks provided)
- (2) Do you want to work?
- (3) If you answered "yes," circle all of the statements above that are reasons why you want to work.

The first question was scored by counting the non-redundant reasons given. (A common redundancy was lists of several things people by; "to make money" was counted only once.) This score reflects students' awareness of work values.

The second question was answered "yes" by all but one student, precluding any further analyses.

The third question is based on the theory that clarification of one's own work values involves accepting some values of which the individual is aware and rejecting others. Thus, scoring was dichotomous; "correct" if some, but not all of the question 1 answers were circled and "incorrect" if all or none of them were.

Design. The performance of fall and spring students was evaluated. The design is summarized below; see page 26 for details.

	<u>Fall evaluation</u>	<u>Spring evaluation</u>
Criterion scores	fall post	spring post
Baseline or comparison	spring pre	spring pre
Statistic	1-way ANOVA & chi square	<u>t</u> for corr. samples & sign test
Sampling	25% - proportionate to class enrollment	

Results. Students demonstrated neither greater awareness of work values nor greater clarity of their own reasons for working as a result of the program.

See also. Objective 1d - Career Knowledge

TABLE 18				
Objective: 2a - Self-Assessment Skills				
Measure: Work Values - number of values listed				
Maximum possible score: 10				
Design/Group	N	Mean	S.D.	Diff, Sig?
Exp. - Comp.				
Fall post	91	2.78	1.48	No
Spring pre	98	2.84	1.72	
Pre-Post				
Spring post	67	2.73	1.50	No
Spring pre		2.90	1.76	
Percentage of spring students whose scores . . .				
improved: 32% stayed the same: 27% declined: 41%				
Measure 3: Percentage of students demonstrating choice of personal work values. (Question 3)				
Design/Group	N	% "Correct" on Ques. 3	Diff. Sig?	
Exp. - Comp.				
Fall post	88	71%	No	
Spring pre	97	65%		
Pre-Post				
Spring post	64	59%	No	
Spring pre		64%		
Percentage of spring students whose scores . . .				
improved: 16% stayed the same: 64% declined: 20%				

OBJECTIVE 2B: STUDENTS WILL BE EQUIPPED WITH CONSUMER SKILLS
IMPORTANT FOR LIFE PLANNING

Classroom emphasis

Teachers reported devoting from 0 to 12 percent of the classroom time to this objective. The average, adjusted for class enrollment, was 4 percent, making this objective rank 9th of nine in classroom emphasis. The most common methods of addressing the objective were whole class discussions and lecture/text.

Student-reported learning

Students rated the helpfulness of the topic, "how to be a good consumer."

The answered as follows:

37% very helpful	8% not helpful
45% somewhat helpful	10% not covered

This objective ranked 9th of nine in student-reported learning.

Measure 1: Consumer Skills

Measure. This 20-item paper-and-pencil test appears on test form 4. The questions were drawn from the National Assessment of Educational Progress 1978 study of Consumer Skills and Attitudes. The questions selected for the test address the following topics, all of which are included in the Career Decisions curriculum:

- credit (8 items)
- banking (5 items)
- insurance (5 items)
- personal budgeting (1 item)
- paycheck deductions (1 item)

TABLE 19

Objective: 2b - Consumer Skills

Measure: NAEP Consumer Skills

Mean score of norming sample (national sample of 17-year-olds): 12.46

Maximum possible score: 20

Design/Group	N	Mean	S.D.	Diff. Sig?
Exp. - Comp.				
Fall post	86	10.43	2.70	No
Spring pre	69	10.31	2.69	
Pre-Post				
Spring post	62	11.44	3.06	Yes
Spring pre		10.56	2.72	$p < .05$
Percentage of spring students whose scores . . .				
improved: 52% stayed the same: 14% declined: 34%				

OBJECTIVE 2c: STUDENTS WILL BE PREPARED TO ADDRESS THE ISSUES
OF LIFE PLANNING

Classroom emphasis

Teachers reported devoting from 0 to 20 percent of the classroom time to this objective. The average, adjusted for class enrollment, was 9 percent, making this objective rank 7th of nine in classroom emphasis. The three most common methods of addressing this objective were whole class discussions, lecture/text, and workbooks.

Student-reported learning

Students rated the helpfulness of the topic, "how to keep improving your career as you grow older."

They answered as follows:

56% very helpful	7% not helpful
30% somewhat helpful	6% not covered

This objective ranked 5th of nine in student-reported learning.

Measure 1: Interest in Career Information

Measure and Decision. Self-initiated career exploratory behavior was measured unobtrusively. Students who participated in Career Decisions in the fall semester and an equal number of sophomores from the same five schools who have never been enrolled in Career Decisions were mailed a brochure at home on June 3. The brochure offered free career pamphlets and brochures; recipients were invited to check up to three career areas of interest (or to enter additional careers not on the list) and to return the pre-stamped and addressed order form to NED.*

*Because Career Decisions students might recognize the name of New Educational Directions or NED, neither appeared on the brochure.

The criterion was whether the order form was received at NED by June 19 (6 days past the announced deadline). The chi-square was used to test the difference between groups' return rates.

Before the brochure was mailed, NED identified 125 business and organizations willing to send career materials to students or to provide NED with multiple copies of their brochures and pamphlets. Students' requests were, of course, filled. The career education program of Monroe County (Indiana) Consolidated School Corporation provided the list of businesses and organizations who were asked to cooperate. This measure was developed by NED for this evaluation with inspiration from John Krumboltz of Stanford University (personal communications, 1979).

Results. There was no significant difference between the two groups' return rates.

TABLE 20

Objective: 2c - Life Planning

Measure: Interest in Career Information

Number of students returning the order form

	<u>N*</u>	<u>Number Returned</u>	<u>Diff. Sig?</u>
Experimental (fall CD students)	151	40 (26%)	No
Comparison (non-participants)	134	38 (28%)	

*Number mailed minus the number returned undeliverable.

Measure 2: Exploratory Activities

Measure. This measure, developed by NED for this evaluation, was administered through personal interviews. Students were asked what, if anything, they had done during the last semester to find out more about careers that interest them or to identify other careers that might interest them. Answers indicate students' initiative to investigate careers on their own. The criterion was the number of responses; responses were also categorized by activity type.

Design. The long-term effect of participation in the fall program was evaluated. Fall students were interviewed in May about their activities during the spring semester, after Career Decisions concluded for them. The comparison group was spring students, who were questioned in February about their fall semester activities. Samples are described on page 63. The chi-square was used to test whether groups were equally likely to engage in one or more exploratory activities and whether they tended to be the same types of activities.

Results. Career Decisions students were substantially more likely to engage in self-initiated exploratory activities after the program than before it. The difference is quite dramatic (75% vs. 53%) even though it reflects the effectiveness of the fall semester program, which was otherwise found ineffective.

Additional analyses demonstrate that Career Decisions prompts students to look beyond the school for career information. Over half of the comparison group's exploratory activities were through the school or youth organizations (enrolling in a related course, talking to a counselor or teacher, going to the school library, joining a special-interest club, etc.). In contrast, 73% of the experimental group's activities

were independent ventures such as getting a part-time job in a related field, writing to trade organizations for information, talking to workers, and visiting businesses. One youth who otherwise seemed very shy told the interviewer the he had picked up the habit of visiting different offices to see what goes on, explaining that, "If you just sit and pretend you're reading a magazine, people don't seem to mind if you hang around."

See also. Objective 1c - Knowledge of Career Information Sources

TABLE 21

Objective: 2c - Life Planning

Measure: Exploratory Activities

Number of youth with at least one activity

<u>Group</u>	<u>N</u>	<u># w/Activity</u>	<u>Diff. Sig?</u>
Experimental (fall)	37	28 (76%)	Yes
Comparison (spring pre)	45	24 (53%)	p < .001

Distribution of activities by category

<u>Category</u>	<u>Exp.</u>	<u>Comp.</u>	<u>Diff. Sig?</u>
In-school	7 (19%)	18 (47%)	Yes
Out-of-school, organized	3 (8%)	2 (5%)	p < .05
Individual	27 (73%)	18 (47%)	
Total	37	38	